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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/734,598 | 12/12/2003 | Michael Heindtel | 03910/0200611-US0 | 1641 |

7278 7590 12/09/2004

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| EXAMINER |
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PATEL, VINOD D

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| ART UNIT | PAPER NUMBER |
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3742

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/734,598 | Applicant(s) HEINDTEL, MICHAEL | |
| | Examiner Vinod D. Patel | Art Unit 3742 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED OFFICE ACTION

INTRODUCTION

1. This application/control number 10/734,598 has been examined. This is the second action on the merits of the claimed invention. The application has claims 1-2, 4-15 pending.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first and second heating conductor as claimed in claim 14, a heating conductor comprising pair of wires spaced a part as claimed in claim 15 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified

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and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 and 4-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birtchet (US5417516) in view of De Witt (US2487839).

Birtchet discloses an electric heated screed assembly (10) for use with a paving machine (12) includes a screed (16) having at least one working component in the form of a smoothing plate (30) comprising: first and second electric heating elements (36) secured in heat transferring condition in a heating area of said working component as shown in the drawings, heating conductor (36) adapted to be connected to a power supply. Birtchet discloses (column 5, lines 44-47) other electric heating elements could be used in place of heating elements (36) of present invention.

Birtchet does not disclose a planar heating element comprising, a planar carrier, a heating conductor wound in a spiral around the planar carrier, the peripheral contour of the carrier and/or the winding density or the course of the windings varies along the length of the carrier to produce a predetermined non-uniform heating picture in the heating area of the working component.

De Witt discloses (Fig.1-3) a planar heating element (nonlinear resistance element) comprising, a planar carrier (10), a heating conductor wound in a spiral around the planar carrier (as shown in the figures), the winding density or the course of the windings varies along the length of the carrier (section 17, 18 and 19) to produce a predetermined non-uniform heating picture in the heating area of the working component.

It would have been obvious to one of ordinary skill in the art at the time of invention to use a planar heating element of DeWitt for the device of Birtchet to produce a predetermined non-uniform heating as desired by the user.

With respect to claim 2, 7 and 8, Birchet or De Witt does not disclose heating conductor has a bandwidth between 1.0 mm and 4.00 mm and band thickness between about 0.1mm and 0.4 mm and the planar heating element has a total thickness between 4.00mm and 10.0 mm and the carrier, around which the heating conductor is wound has substantially uniform thickness in the range between 1.00 mm and 3.00 mm and the planar heating length between 0.9 m to 1.2 m and width of between 50 mm to 100 mm and has a power consumption of between 500 watts and watts, preferably of about 600 watts.

It is well established that the above listed variables are result-effective variables; that is, variables which achieve a recognized result before the determination of their optimum or workable ranges by routine experimentation. In re Antonie, 559 F.2d 618, 620, 195 USPQ 6,8 (CCPA 1977). General conditions of the claims are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by engineering or routine experimentation. It would have been obvious to one having ordinary skill in the art at the time the invention was to

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modify the result-effective variables in De Witt to the values and ranges as claimed by using routine engineering procedure to optimize the operation of the heating device.

It would have been obvious to one of ordinary skill in the art to use planar heating assembly of De Witt for the electric heated screed assembly (10) (for use with a paving machine) of Birtchet to provide a more responsive and reliable heater (Column 4, line 58-60) and to produce a predetermined non-uniform heating as desired by the user.

5. Applicant's arguments with respect to claims 1-2 and 4-15 have been considered but are moot in view of the new ground(s) of rejection.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The art should be both separately considered and considered in conjunction with the previously cited art when responding to this action. McGraw (US2493542), Hideyuki (JP 01211884 A), Hitoshi (JP 04031576 A), Shigeo (JP 03084423 A), Takayasu (JP 07092852 A), Tsutomu (JP 05290953 A), Masahito (JP 01281339 A), Kokichi (JP 04020721 A) relate to heater having variable winding.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinod D. Patel whose telephone number is 703-308-5227. The examiner can normally be reached on 7.30 A.M. TO 4.00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 703-305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be

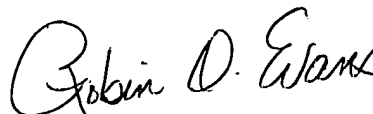
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obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP



Vinod Patel
Patent Examiner
Art Unit 3742



ROBIN O. EVANS
PRIMARY EXAMINER

12/6/04